

### ABSTRACT

5 A conventional syringe pump (10) is used to dispense liquids of less than 5  $\mu$ l in volume in a dispensing assembly (1). There is a divider barrier formed by a flexible elastomer membrane (5) clamped between an inner part (3) and an outer part (4) of a dispenser (2). The dispenser (2) has a bore divided into a system liquid reservoir (6) and a sample liquid reservoir (7). The system liquid reservoir (6) connects to the pump (10) and the sample liquid reservoir (7) communicates with a nozzle (15) having a dispensing tip (16). The membrane (5) is virtually incompressible and therefore the  
10 pump (10) can dispense accurately. Electrostatic drop detachment using an electrode (25) electrically coupled to the dispensing tip (16) and a conducting plate (19) forming a receiving electrode below a substrate (20).

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